REMARKS

In the office action mailed August 13, 2003, the drawings were further objected to and the amendment filed with the Request for Continued Examination was objected to as not indicating that claims 4, 6, 13 and 15 had previously been canceled. Responsive to the office action, a new drawing sheet for Figure 3 is being submitted with a Letter Regarding Drawing Changes. Formal drawings will be submitted upon approval of the above changes to Figure 3. The present response properly indicates that claims 4, 6, 13 and 15 had previously been canceled.

Also in the office action mailed August 13, 2003, claims 1, 5, 7 - 10, 14, 16 - 19, 21 and 22 were rejected under 35 U.S.C. §103(a) over EP 0,905,879 (to Herzinger), which is in German, in view of U.S. Patent No. 6,208,875 (to Damgaard et al.) The Herzinger reference appears to correspond to German Patent DE 197434207, an English translation of which was filed in connection with this application via facsimile on December 5, 2002.[1] Claims 2, 3, 11, 12 and 20 were also rejected under §103(a) over Herzinger in view of Damgaard et al. and further in view of U.S. Patent No. 5,130,670 (to Jaffe).

The Herzinger reference also discloses a transmitter circuit for generating a high frequency transmission signal that is disclosed to be used in at least two frequency bands (GSM and DCS). Herzinger discloses, however, that the frequency plan is changed (e.g., from GSM to DCS) by varying the values of N and R of the frequency dividers. The circuit shown in Figure 2 of Herzinger requires that either the values of the frequency dividers be varied and/or

1 As noted by the Applicant's representative during the telephone interview on May 29, 2003, the equation that appears in the right side column of page 2 of the English translation of Herzinger at about line 3 should read

the frequency of the local oscillator (LO) be varied, which will change the frequency of the output to provide a circuit with a different frequency plan. In particular, Herzinger states:

> The use of two dividers FT1 and FT2 with divider values of N and R, which may be different or the same, provides a high degree of freedom in determining the frequency plan.

Herzinger translation, left column, page 5, lines 8 - 12.

The teaching of Herzinger, therefore, is that the values of the frequency dividers may be independently varied to any value to achieve any desired frequency plan. For all values, however, fVCO=fLO (R-N):R or $F_{LO}=F_{OUT}/(1-n/r)$.

The Damgaard et al. reference also discloses a radio frequency transmitter system for use in two frequency bands (GSM and DCS 1800). The Damgaard et al. reference discloses that an intermediate frequency (IF) VCO may be used that is adjustable to achieve the two different IF frequencies for the GSM and DCS 1800 signals. (Damgaard et al., col.5, lines 6 - 11). Filters and switches are then used to choose one or the other signal during transmission or reception and to remove the signal that is not being used. Any combination of the two references would likely result in a system that changes both a VCO and the value of one or more frequency dividers to achieve the dual band operation.

Applicant's system does not require that frequency dividers be changed or that any VCOs be changed. Applicant's invention is directed to a specific relationship between the values of the frequency dividers and the two frequency plans at which the circuit may operate such that $RF_{OUT} = RF_{LO} + RF_{IF}$ for DCS and $RF_{OUT} = RF_{LO} - RF_{IF}$ for GSM. (Specification,

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"fVCO=fLO(R-N):R" instead of "fVCC=fLO(R-N):R".

page 6, lines 11 - 19). This avoids changing the values of frequency dividers (as taught by Herzinger) and avoids changing the value of a VCO (as taught by Damgaard et al.). In fact, Applicant's system does not even require an IF VCO.

Applicant has developed a circuit therefore, in which the frequency plan may be changed (e.g., from GSM to DCS) by choosing either $F_{LO}=F_{OUT}/(1-n/r)$ or $F_{LO}=F_{OUT}/(1+n/r)$.

The Jaffe reference does not disclose a translation loop modulator having two modes of operation, and further provides no teaching or suggestion that would have led one of ordinary skill in the art at the time of the invention to modify the disclosures of the Herzinger reference or the Damgaard et al. reference to achieve the subject of the applicant's invention as claimed.

As claimed in each of independent claims 1, 10 and 19, therefore, the circuit is clearly for use in a communication system having a first mode of operation at a first frequency and a second mode of operation at a second frequency, and $F_{LO}=F_{OUT}/(1+n/r)$ in said first mode of operation, and $F_{LO}=F_{OUT}/(1-n/r)$ in said second mode of operation. Dependent claims 2 - 9, 11 - 18 and 20, as well as new claims 21 and 22 depend from the above independent claims further limit the subject matter of the respective independent base claims.

Each of claims 1 - 22, therefore, is in condition for allowance. Favorable action consistent with the above is respectfully requested.

Respectfully submitted,

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